

ABSTRACT:

An optical signal processor comprises a first input terminal for a pulse signal light with a signal wavelength, a second input terminal for a probe light with a probe wavelength
5 different from the signal wavelength, a first splitter to split the probe light into two portions, an XPM optical device, ~~to~~ T.T.
~~which one portion of the split output lights from the first splitter and the pulse signal light enter,~~
10 ~~to modulate the one portion of the split output lights from the splitter according~~ T.T.
~~to amplitude variation of the pulse signal light,~~ a second splitter to split the light with the probe wavelength phase-modulated by the XPM optical device into two portions, a first combiner to combine the other portion of the ~~split~~ Split
15 the split output lights from the first splitter with the one portion of the split output lights from the second splitter ~~in in phase~~ T.T.
~~relation during a period corresponding to a non-pulse period of the pulse signal light,~~ and a second combiner to combine the other portion of the split output lights from the second
20 ~~splitter with the output light from the first combiner in~~
~~in phase relation during a period corresponding to a pulse period of the pulse signal light.~~